

## CHAPTER 6

# URBAN OPERATIONS

*Throughout history military planners have viewed cities as centers of gravity and sources of national strength. Cities are population centers; transportation and communication hubs; key sites of industrial, financial, and information systems; seats of government; and repositories of wealth. Because the US has worldwide interests that directly relate to global security, deployments into urban environments are likely to become more frequent. These urban operations will serve a variety of tactical purposes: to neutralize or stabilize extremely volatile political situations; to defeat an enemy force that has sought the protection afforded by urban terrain; to provide assistance to allies in need of support. This chapter describes techniques, procedures, and special considerations that platoons and squads will use throughout the planning and execution of operations in an urban environment.*

### Section I. OFFENSE

While operating in urban areas, the major offensive collective tasks at platoon and squad level are attacking and clearing buildings. This involves isolating the objective, suppressing the enemy, advancing the assault element, assaulting the building, clearing the building, and consolidating and reorganizing the force.

Regardless of the type of urban area or its structural characteristics, there are six interrelated requirements for attacking a defended building:

- Isolation of objective.
- Supporting fires.
- Tactical movement.
- Conduct the breach.
- Conduct the assault.
- Consolidation and reorganization.

Proper application and integration of these requirements reduces casualties and hastens accomplishment of the mission. The type of building to be assaulted, the ROE, and the nature of the surrounding urban area will determine the method of execution. For example, medium-size towns have numerous open spaces, and larger cities have high-rise apartments and industrial and transportation areas that are separated by parking areas or parks. Increased fire support is required to suppress and obscure enemy observation and fires that may be covering the open terrain and spaces between buildings. Conversely, the centers of small- and medium-sized towns, with twisting alleys and narrow roads or adjoining buildings, provide numerous covered routes that can decrease fire support requirements.

Platoon and squad leaders must consider the assigned task, its purpose, and the method they will use to achieve the desired results. The leader may not need to commit troops into a structure or close with the enemy in order to seize or gain control of a building, a group of buildings, or an area. For example, if the enemy personnel have low morale or are poorly trained, under equipped, or lack leadership, they may be convinced

to surrender or depart from the premises simply by a show of force and the use of a skilled PSYOPS team. At the other end of the spectrum is the well-trained enemy that is prepared to defend and has the means to resist. In this case the leader may decide (ROE permitting) to concentrate his direct and indirect fire weapons and other combat support systems onto the objective area in order to neutralize the enemy without maneuvering troops to conduct an assault.

#### **6-1. TASK ORGANIZATION (PLATOON ATTACK OF A BUILDING)**

When conducting offensive urban operations, the company commander normally organizes the company into two elements: an assault element and a support element. The mission to breach is METT-TC dependent and normally will be conducted by personnel within the assault element. If engineers are available, they will be task-organized into the assault element. The support element or an adjacent company, if part of a battalion effort, isolates the objective area (security).

As part of the company assault element, the platoon organizes into three assault squads with two assault teams each. It will likely attach one machine gun to the company support element and maintain two machine guns for close support within the assault element. As the company's support element, the platoon may be organized into three support squads and two BFV sections supplemented with machine guns and antiarmor weapons for increased lethality.

Platoons seldom perform independent operations in urban areas, but they may become separated or isolated during combat operations. This paragraph discusses the methods a platoon uses when required to conduct independent offensive urban operations. The platoon leader normally will organize his platoon into at least two elements: an assault element and a support element (Figure 6-1). Engineers attached to the assault element may conduct the breaching task. If engineers are not available, the platoon leader may designate a breaching team from within either the assault or the support element or, depending on the situation, he may task organize a separate breach element. The platoon leader determines the size and composition of these elements based on the mission, the number of troops available, the type and size of the objective building, whether the adjacent terrain provides open or covered approaches, and the organization and strength of the enemy defenses.

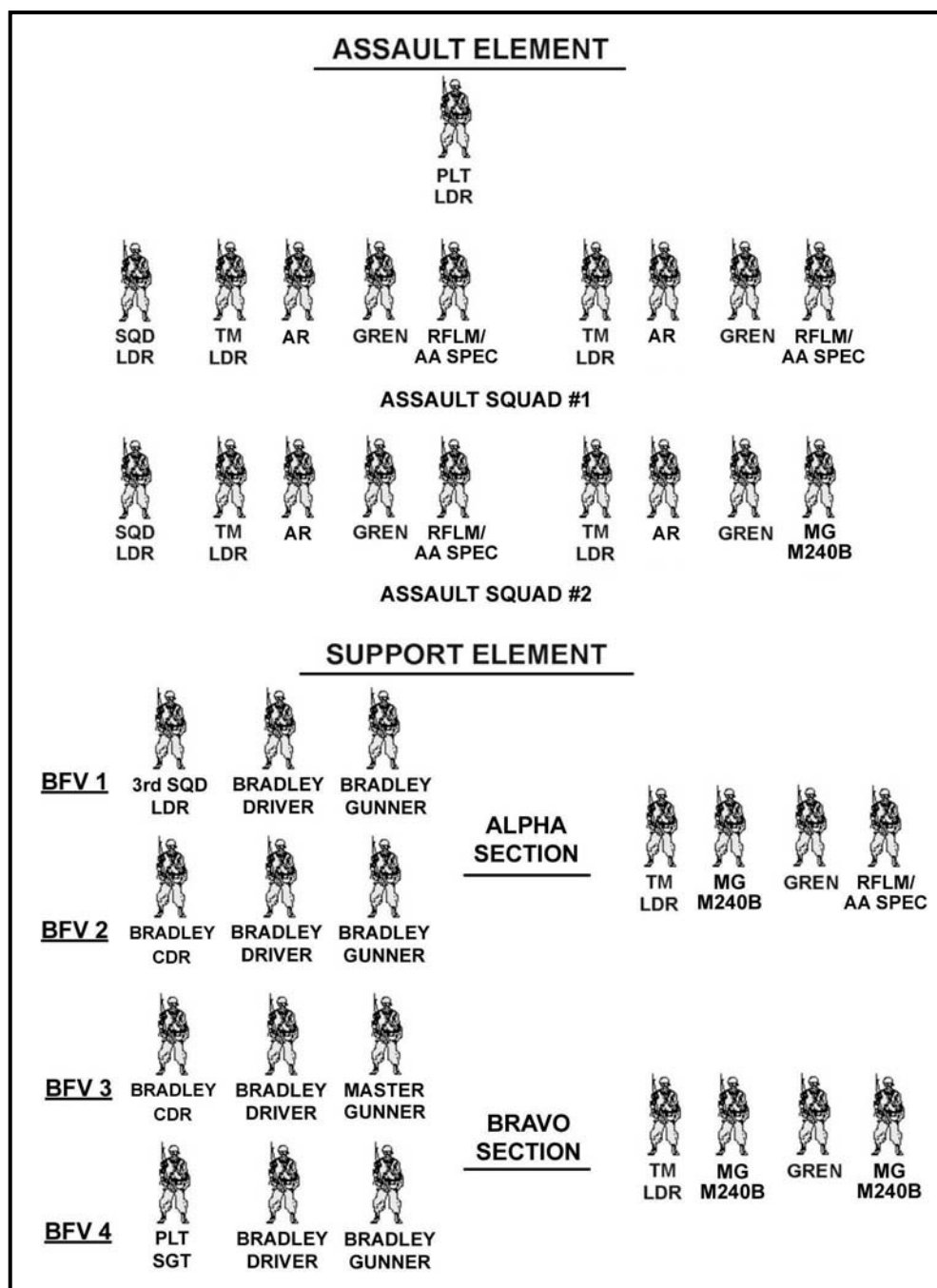


Figure 6-1. Platoon organization.

a. **Assault Element.** The purpose of the assault element is to kill, capture, or force the withdrawal of the enemy from any urban objective, and to seize key terrain. The assault element of a platoon may consist of one, two, or three squads. Squad leaders normally organize their two fire teams into two clearing teams or, in special circumstances, the squad may be kept as a single assault squad.

**NOTE:** Clearing techniques are designed to be executed by the standard four-man fire team. This does not mean that all four members must enter a room in order to clear it. Because of the confined spaces typical of building and or room clearing operations, units larger than squads quickly become awkward and unmanageable. When shortages of personnel demand it, two- and three-man teams can conduct room-clearing operations, but four-man teams are best suited to this task. Using fewer personnel adds to the combat strain and greatly increases the risk to the team. For clearing large open buildings, such as hangars or warehouses, it may be necessary to use two squads simultaneously, employing bounding overwatch, to effectively clear the entire structure and to provide force protection.

b. **Support Element.** The purpose of the support element is to provide immediate suppressive fire support to enable the assault element to close with the enemy. Normally, the BFV will be the primary support by fire weapons system for the platoon. The supporting fires must be closely controlled to avoid excessive expenditure of ammunition and to prevent fratricide. At platoon level, the platoon sergeant controls the support element, which consists of the platoon's BFVs, antitank weapons systems, and any personnel not designated as part of the assault element. (Usually one squad remains with the BFVs to provide security for the vehicles.) The support element provides direct fire support and other assistance to advance the assault element. This assistance includes, but is not limited to, the following:

- Suppressing enemy weapons systems and obscuring the enemy's observation within the objective building(s) and adjacent structures.
- Isolating the objective building(s) with direct fires to prevent enemy withdrawal, reinforcement, or counterattack.
- Obscuring enemy observation of obstacles en route to and at the entry point to the objective during breaching operations.
- Destroying or suppressing enemy positions with direct fire weapons.
- Engaging enemy armor with antitank weapons.
- Securing cleared portions of the objective.
- Providing replacements for the assault element.
- Providing the resupply of ammunition and pyrotechnics.
- Bringing up specific equipment that the assault element could not carry in the initial assault.
- Evacuating casualties, prisoners, and civilians.

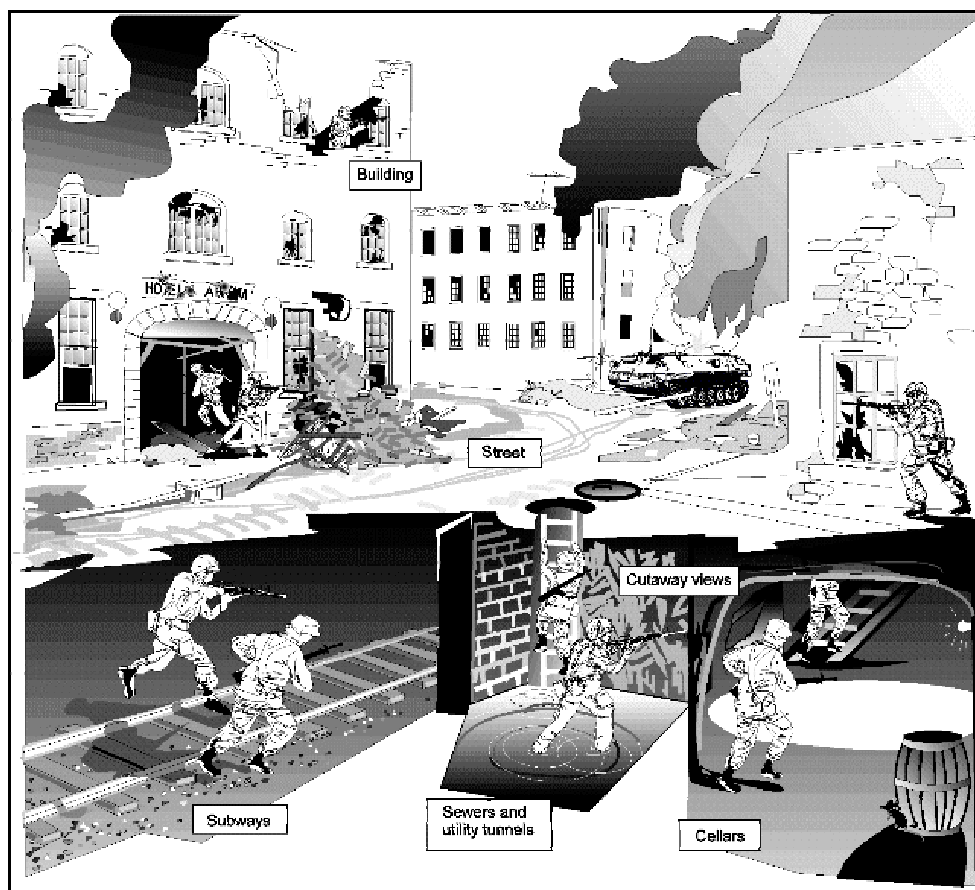
**NOTE:** The platoon sergeant must be prepared to rapidly evacuate the wounded from the objective area to the company casualty collection point (CCP). The use of ground ambulances may be impeded by rubble in the streets, barricades, and demolition of roads; therefore, litter teams could be used extensively. Additionally, snipers can affect medical evacuation from forward positions.

c. **Breach Team.** The purpose of the breach team is to clear and mark lanes through obstacles during movement and to provide the assault element with access to an urban objective. The platoon leader organizes the force to ensure that breaching teams are

identified. One technique is to assign one fire team from the assault element as the breaching team. The breach can also be conducted using an attached engineer or any member of the platoon who has had additional training in breaching techniques.

## 6-2. MOVEMENT

When moving in an urban area, squads and platoons use modified variations of the traveling, traveling overwatch, and bounding overwatch movement techniques. Often squads and fire teams will use the modified wedge (file or column) to move. Leaders must be aware of the three-dimensional aspect of urban terrain such as streets, buildings, subsurface, and airspace (Figure 6-2). Squads and platoons are extremely vulnerable to sniper fire; therefore, to prevent excess casualties, countersniper techniques must be well rehearsed and implemented. (See FM 3-06.11 for more information concerning countersniper techniques.)



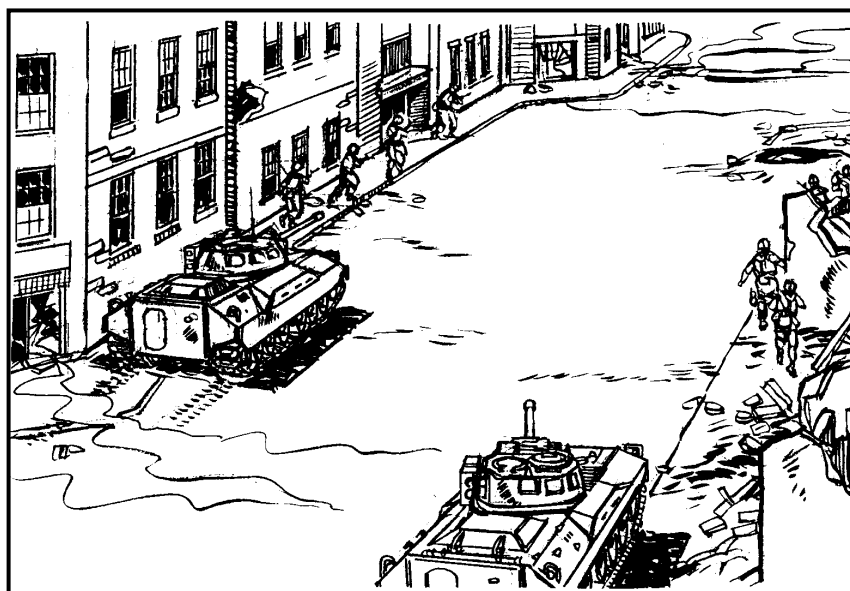
**Figure 6-2. Three-dimensional urban terrain.**

a. In house-to-house and street fighting, the BFVs move along streets protected by the infantry, which clears the area of enemy antitank weapons. The BFVs in turn support the infantry with their 25-mm cannon and 7.62-mm coaxial machine gun (Figure 6-3, page 6-6). The BFV can also provide smoke obscuration with the M257 smoke grenade

launcher. The L8A1/A3 red phosphorus smoke grenade will last for 1 to 3 minutes, while the M76 infrared screening grenade provides obscuration for 30 to 60 seconds.

b. The assault force (squad or platoon) minimizes the effects of the enemy's defensive fires during movement by:

- Using covered and concealed routes.
- Moving only after enemy fires have been suppressed or enemy observation obscured.
- Moving at night or during periods of reduced visibility.
- Selecting routes that will not mask friendly suppressive fires.
- Cross open areas quickly under the concealment of smoke and suppression provided by the support element.
- Moving on rooftops not covered by enemy fires.



**Figure 6-3. BFVs provide cover for rifle squads.**

c. In lightly defended areas, the type of operation may dictate moving along streets and alleys without clearing all the buildings.

d. To avoid exposure on the street or to provide mutual support, the infantry squads should move through the buildings, if possible.

e. The platoon moves along streets and alleys with two squads leading, one on either side of the street, supported by BFVs in the overwatch. The squads should move using bounding overwatch to quickly locate, identify, engage, and eliminate all enemy antiarmor weapon systems.

**NOTE:** When employing armored vehicles along side the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast over pressure, and how it will affect the infantry on the ground. (For more specific information on the effects of weapons see FM 3-06.11.

### 6-3. ASSAULTING A BUILDING

The assault element, regardless of size, must quickly and violently execute the assault and subsequent clearing operations. Once momentum has been gained, it is maintained to deny the enemy time to organize a more determined resistance on other floors or in other rooms. The small unit leaders are responsible for maintaining the momentum of the assault yet not allowing the operation to become disorganized. Obstacles may slow or stop forward movement. Leaders must maintain the momentum by rapidly creating a breach in the obstacle, or by redirecting the flow of the assault over or around the obstacles.

a. **Approaches.** All routes to the breach and or entry point are planned in advance. The best route is confirmed and selected during the leaders' reconnaissance. The route should allow the assault element to approach the breach (entry) point from the blind side, if possible.

b. **Order of March.** The assault team's order of march to the breach point is determined by the method of breach and their intended actions at the breach (entry) point. This preparation must be completed prior to or in the last covered and concealed location before reaching the breach (entry) point. Establishing an order of march aids the team leader with C2 and minimizes exposure time in open areas and at the entry point. An order of march technique is to number the assault team one, two, three, and four. The number-one man should always be responsible for frontal and or door security. If the breach has been conducted prior to their arrival, the assault team quickly moves through the breach (entry) point. If a breach has not been made prior to their arrival at the breach (entry) point, and depending on the type of breach to be made, the team leader conducts the breach himself or signals forward the breach man or element. One option is to designate the squad leader as the breach man. If the breach man is part of the assault team, he will normally be the last of the four men to enter the building or room. This allows him to transition from his breaching task to his combat role. (See FM 3-06.11 for more information concerning movement and breaching methods.)

(1) **Explosive Breach.** A suggested order of movement for an explosive breach without engineer support is; number-one, number-three (team leader), number-two, and then number-four man. The number-one man provides security at the entry point. The number-three man (team leader) carries the demolition charge and places it. Number-four provides rear security. After the demolition charge is placed, team members re-form in their original configuration and take cover around a corner or behind other protection. Team members can line up on either or both sides of the entry point, if there is adequate protection from the blast.

(2) **Ballistic Breach (Small Arms).** A suggested order of movement for a ballistic (small arms) breach places the gunner up front, followed by the number-one man, number-two man, and then the number-three man (team leader). After the door is breached, the gunner moves to the rear of the lineup and assumes the position of the number-four man.

(3) **Mechanical Breach.** A suggested order of movement for a mechanical breach is the initial assault team in order, followed by the breach man or element. At the breach point the team leader brings the breach element forward while the assault team provides local security. After the breach is made, the breach element moves aside and provides local security while the assault team enters the breach.

c. **Security.** Because of the three-dimensional threat associated with urban terrain, the assault element must maintain 360-degree security during movement to the breach (entry) point. If the assault element is to stop in the vicinity of the breach (entry) point to wait for the breach element to complete its task, the support element must maintain suppressive fire to protect the assault element.

d. **Assault Locations.** Entry at the top and fighting downward is the preferred method of clearing a building (Figure 6-4). This forces the defenders down and out of the building where the support element can engage them. This method is only feasible, however, when access to an upper floor or rooftop can be gained either from the windows or roofs of adjoining, secured buildings or by using a ladder. Rooftops are treated as danger areas when surrounded by higher buildings from which enemy forces could engage the assault element. Troops breach the roof or common walls to gain entrance into the building. (If using explosives on the rooftop, ensure cover is available to the soldiers.) They may use ropes or other means to enter the lower floors through the holes created during the breach.

**NOTE:** Soldiers should consider the use of devices and other techniques that allow them upper level access without using interior stairways. Those devices and techniques include, but are not limited to, adjacent rooftops, fire escapes, portable ladders, and various soldier-assisted lifts. (See FM 3-06.11.)



**Figure 6-4. Assault element entering through upper level.**

e. **Support Element.** The support element isolates the building with direct and indirect fires to support the assault element's move to the breach point. The support element covers mounted avenues of approach with antiarmor weapons and covers dismounted avenues of approach with automatic weapons. It suppresses enemy fires and



neutralizes enemy positions within the objective building and adjacent buildings as the breach team and assault element move into position. The support element eliminates any enemy trying to exit the building. The location of adjacent units must be considered in the emplacement of supporting fires.

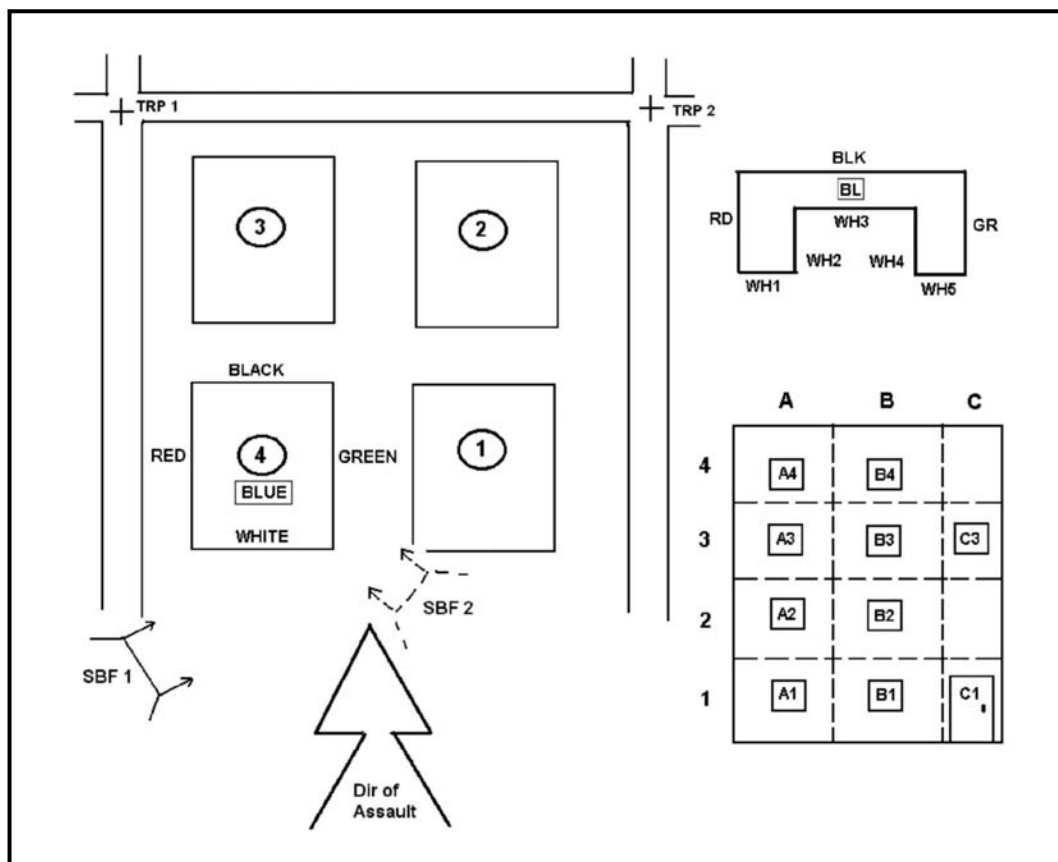
(1) The support element uses smoke to obscure the movement of the breach and assault element to the building. If possible, the smoke obscuration is maintained until the assault element has entered the building.

(2) Depending upon the ROE, just before the maneuver of the assault element, the support element increases suppressive fires on the objective and continues until masked by the advancing assault element. (See Figure 6-5, page 6-10, for fire control technique.) Once masked, the support element shifts fires to upper or lower windows and continues until the assault element has entered the building. At that time, they shift fires to adjacent buildings to prevent enemy withdrawal or reinforcement.

(3) If the ROE are very restrictive, the use of supporting fires may be restricted to known enemy locations that have engaged the unit.

(4) The support element must also deal with civilians displaced by the assault, EPWs, and casualties.

f. **Direction of Assault Technique of Direct Fire Planning and Control.** In this technique, building numbers are assigned in a consistent pattern in relation to the direction of assault. In the example shown in Figure 6-5, page 6-10, the buildings are numbered consecutively, in a counterclockwise manner. Further, the sides of the buildings are color-coded consistently throughout the objective area (WHITE—direction of assault side; GREEN—right side; BLACK—rear side; RED—left side; BLUE—roof). An odd-shaped building is also shown. Note that a “four-sided” concept was retained to minimize confusion. Further designations of WHITE 1, WHITE 2, WHITE 3, and so on from left to right can be added to specify which wall will be engaged. Apertures on the buildings are also labeled consecutively using rows and columns, as shown. In the example, “OBJ 4, WHITE, window A1” is the lower left-hand window on the direction of assault side of OBJ 4. All designations are labeled in relation to the direction of assault. (See FM 34-130 for additional information on building shapes and structural labeling.)



**Figure 6-5. Direction of assault technique of fire control.**

#### **6-4. CONDUCT OF THE BREACH**

Soldiers may be fighting just to get to the breach point; therefore, proper fire and movement will be required all the way to the breach (entry) point. To start the violence of action needed to enter the building, consider firing into windows and doors or throwing fragmentation grenades, concussion grenades, or stun grenades into the room to be cleared, if the ROE allows. (While fragmentation and concussion grenades are effective casualty-producing weapons, the stun grenade may be used as a distraction device to provide the clearing team an extra second or two to achieve domination when entering the breach.) The rest of the squad or platoon will provide support to secure (left, right, up, and down) the assault element. Remember that the fight is three-dimensional and in 360 degrees. While it is preferable to avoid entering the room to be cleared through windows and doors, since they are usually covered by direct fire or are booby-trapped, the ROE may require using them in order to gain entry. If doors and windows are not used for the entry, the assault element must remain oriented on these danger areas as they approach the breach location. It may need to augment or create obscurity with hand-held smoke, but must remember not to mask the fires of the support element or obscure the breach (entry) point from friendly observation and fires. If possible, the breach is conducted in such a manner as to allow the assault element to continue movement without having to wait at the breach (entry) point. Deception should be used to confuse the enemy as to the location of the primary entry point. This can be achieved by using fragmentation

grenades, concussion grenades or stun grenades in an area other than the actual breach or entry point.

a. **Breaching Methods.** The three breaching methods discussed here are explosive, ballistic, and mechanical.

(1) **Explosive Breach.** This method of breaching requires the use of an explosive composition such as C4 or TNT, or a manufactured shape charge directed against the target.

(a) *Exterior Walls.* One of the most difficult breaching operations for the assault team is breaching masonry and reinforced concrete walls. Composition C4 is normally used for explosive breaching because it is safe, easy to use, and readily available. Engineers are usually attached to the platoon if explosive breaching operations are expected. The attached engineers will either conduct the breach themselves or provide technical assistance to the infantrymen involved. The typical thickness of exterior walls is 15 inches or less. Assuming that all outer walls are constructed of reinforced concrete, a rule of thumb for breaching is to place 10 pounds of C4 against the target between waist and chest height. When detonated, this charge normally blows a hole large enough for a man to go through. On substandard buildings, however, a charge of this size could rubble the building. When explosives are used to breach windows or doors, the blast should eliminate any booby traps in the vicinity of the window or doorframe. (See FM 3-06.11 for information concerning demolitions.)

(b) *Charge Placement.* Place the charges (other than shape charges) directly against the surface that is to be breached. When enemy fire prevents an approach to the wall, a technique may be to attach the breaching charge, untamped, to a pole and slide it into position for detonation at the base of the wall. Small-arms fire will not detonate C4 or TNT. Take cover before detonating the charge.

(c) *Tamping.* Whenever possible, explosives should be tamped or surrounded with material to focus the blast to increase their effectiveness. Tamping materials could be sandbags, rubble, desks, chairs, and even IV bags. For many exterior walls, tamping may be impossible due to enemy fire. An untamped charge requires approximately twice the explosive charge of a tamped charge to produce the same effect.

(d) *Second Charges.* Breaching charges will not cut metal reinforcing rods inside concrete targets. If the ROE permits, hand grenades should be thrown into the opening to clear the area of enemy. Once the area has been cleared of enemy, the reinforcing rods can be removed using special steel cutting explosive charges or mechanical means.

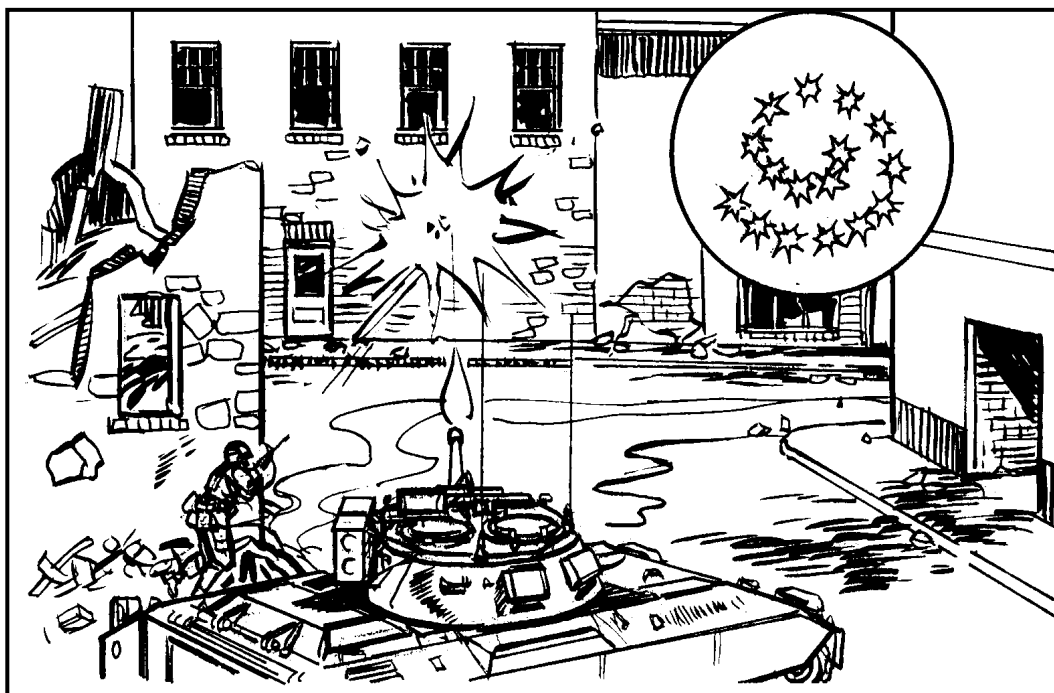
(2) **Ballistic Breach.** This method requires the use of a weapon firing a projectile at the breach point.

(a) For exterior walls, the use of a BFV or artillery piece in the direct fire role is ideal if the structure will support it and if the ROE will allow it. The BFV's 25-mm cannon is an effective breaching weapon when using HE rounds and firing a spiral firing pattern (Figure 6-6, page 6-12). The main gun of an M1A1/A2 tank is very effective when using the HEAT round; however, the APSD round rarely produces the desired effect because of its penetrating power. The 12-gauge shotgun breaching round is effective on doorknobs and hinges, while standard small arms (5.62-mm and 7.62-mm) have proven to be virtually ineffective for breaching. These should not be used except as a last resort because of their ricochet potential and shoot-through capability. Ballistic breaching of walls by shotgun fire is normally an alternate means of gaining entry. Ballistic breaching

is not a positive means of gaining entry and should not be considered the primary method for gaining initial entry into a structure. It may not supply the surprise, speed, and violence of action necessary to minimize friendly losses on initial entry. In certain situations, it may become necessary to use ballistic breaching as a back-up entry method. A misfire of an explosive charge or the compromise of the assault element during its approach to the target may necessitate the use of ballistic breaching as a means of initial entry into the structure. Ballistic breaching may have to be followed up with a fragmentation, concussion, or stun grenade before entry.

**WARNING**

The fragmentation and ricochet effects of standard small arms (5.56-mm and 7.62-mm) as breaching rounds is unpredictable and considered extremely dangerous. Do not attempt in training.



**Figure 6-6. Spiral firing pattern.**

(b) Once initial entry is gained, shotgun ballistic breaching may become the primary method for gaining access to subsequent rooms within the structure. Surprise is lost upon initial entry, and other breaching methods are often too slow and tend to slow the momentum of the assault team. If a door must be used for entry, several techniques can be used to open the door. Doors should be considered a fatal funnel because they are

usually covered by fire, or they may be booby-trapped. (See FM 3-06.11 for more information concerning weapon employment and effects.)

(c) Rifle-launched entry munitions (RLEM) (Figure 6-7) allow a remote ballistic breach of an exterior door or window without having the assault or breaching element physically present at the breach (entry) point. This allows the assault element to assume a posture for entry in the last covered and concealed position before the breach. The RLEM firer is not normally part of the assault element, but rather a part of the breaching or support element. This allows the RLEM to be fired from one position while the assault element waits in another position. In the event that the first round does not affect the breach, either the firer should prepare a second round for the breach or a second firer should be prepared to engage the target.



**Figure 6-7. Rifle-launched entry munitions.**

**WARNING**

**Firer must be a minimum of 10 meters from target to safely employ a 150-gram round.**

**NOTE:** Exact minimum safe distances for firers and assault elements have not been established for the 150-gram round.

(3) **Mechanical Breach.** This method requires increased physical exertion by one or more soldiers using hand tools such as axes, saws, crowbars, hooligan's tools, or sledgehammers. The mechanical breach is not the preferred primary breaching method because it may be time consuming and defeat the element of surprise. However, the ROE and the situation may require the use of these tools, so soldiers should be proficient in their use. (See FM 3-06.11 for additional information concerning mechanical breaching.)

b. **Breach Locations.** The success of the assault element often depends on the speed with which they gain access into the building. It is important that the breach location provide the assault element with covered or concealed access, fluid entry, and the ability to be overwatched by the support element.

(1) **Creating Mouseholes.** Mouseholes provide a safe means of moving between rooms and floors. C4 plastic explosive can be used to create mouseholes when lesser means of mechanical breaching fail. Because C4 comes packaged with an adhesive backing, or can be emplaced using pressure-sensitive tape, it is ideal for this purpose.

When using C4 to blow a mousehole in a lath and plaster wall, one block or a strip of blocks should be placed on the wall from neck-to-knee height. Charges should be primed with detonating cord or MDI to obtain simultaneous detonation, which will blow a hole large enough for a man to fit through.

(2) ***Expedient Breaching Methods.*** Because the internal walls of most buildings function as partitions rather than load-bearing members, smaller explosive charges can be used to breach them. When C4 or other military explosives are not available, one or more fragmentation grenades or a Claymore mine can be used to breach some internal walls. These field expedient breaching devices should be tamped to increase their effectiveness and to reduce the amount of explosive force directed to the rear. Extreme care must be taken when attempting to preform this type of breach since fragments may penetrate walls and cause friendly casualties. If walls are made of plaster (dry wall), mechanical breaching may be more effective.

(3) ***Door Breaching Charges.*** The general-purpose charge and the flexible linear charge are field-expedient charges that can be used to breach interior and exterior doors. These charges give the breach element an advantage because they can be made ahead of time and are simple, compact, lightweight, and easy to emplace. (See FM 3-06.11 for more information concerning door breaching charges.)

(4) ***Windows and Restrictive Entrances.*** Regardless of the technique used to gain entry, if the breach location restricts fundamental movement into the room or building, local or immediate support must be used until the assault team can support itself. For example, as a soldier moves through a window and into the room, he may not be in a position to engage an enemy; therefore, another window that has access to the same room may be used to overwatch the lead team's movement into the room. The overwatching element can come from the initial clearing team or from the team designated to enter the breach location second.

## **6-5. ENTER AND CLEAR A BUILDING**

A large portion of combat in urban areas takes place at very close ranges, often between small groups of combatants within the confines of a single room. Success or failure is often determined by actions taken instinctively by individual soldiers and fire teams as they encounter complex situations. One of the complexities often encountered is the intermixing of combatants with noncombatants in the same building and often in the same rooms.

a. **Principles.** The principles of precision combat are surprise, speed, and controlled violence of action. These principles do not change regardless of ROE. The three principles of precision combat are each relative to one another—successful surprise allows increased speed; controlled violence coupled with speed increases surprise.

(1) ***Surprise.*** Surprise is one of the elements necessary for a successful assault at close range. The assault team achieves surprise by attacking at a time and location unexpected by the defender. Hand grenades, concussion grenades, or stun grenades are used to achieve surprise. These techniques are most effective against a nonalert, poorly trained enemy. An explosive or ballistic breach will also provide the element of surprise by stunning the occupants of a room.

(2) ***Speed.*** Speed provides a measure of security to the clearing unit. Speed allows soldiers to use the first few seconds provided by surprise to their advantage. In urban

combat, speed does not mean incautious haste. It can best be described as a “careful hurry.”

(3) ***Controlled Violence of Action.*** Controlled violence of action eliminates or neutralizes the enemy and decreases his chances of inflicting friendly casualties. Controlled violence of action is not limited to the application of firepower. It also involves a highly motivated soldier and his ability to dominate and control the combat situation.

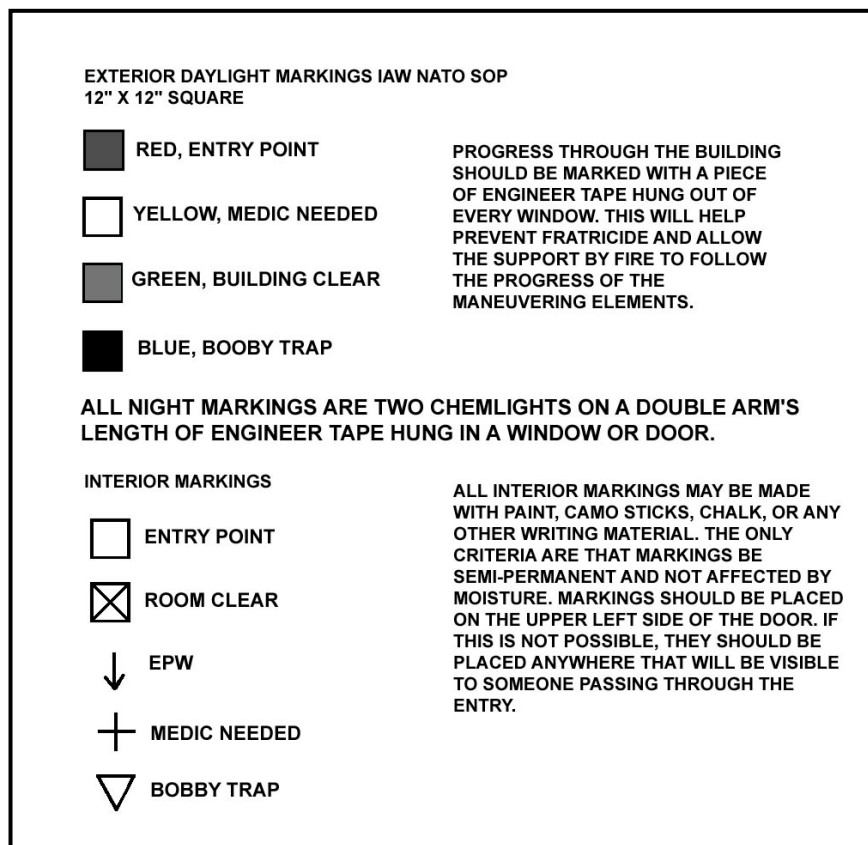
b. **Fundamentals of Clearing Operations.** The fundamentals of clearing operations are the actions soldiers take while moving along confined corridors to the room to be cleared, while preparing to enter the room, during room entry and target engagement, and after contact. Team members must—

- Move tactically while securing the corridors to the room to be cleared. To prevent fatigue, noise, and interference while moving, the assault team should minimize the equipment they carry.
- If possible, arrive undetected at the entry to the room and in the correct order of entrance, prepared to enter on a single command or signal.
- Ensure security is maintained outside the room to protect the assault team inside the room.
- Enter quickly and dominate the room. They must move immediately to positions that allow complete control of the room and provide unobstructed fields of fire.
- Eliminate all enemy soldiers within the room with quick, accurate, and discriminating fires.
- Gain and maintain immediate control of the situation and all personnel in the room.
- Confirm whether enemy casualties are wounded or dead. They must search all enemy casualties, disarming them and segregating the wounded.

**NOTE:** Soldiers can carry and use small plastic flex cuffs to control civilian detainees or captured military personnel.

- Immediately perform a cursory search of the room and determine if a detailed search is required.
- Evacuate all wounded as quickly as possible. Friendly wounded should be evacuated as soon as they are out of direct small arms fire.
- Evacuate any friendly dead.
- Mark the room as cleared in accordance with unit SOP using simple, clearly identifiable markings (Figure 6-8, page 6-16). Some common markings can include spray paint, a reflective physical training strap, chalk, engineer tape, chem lights, and NATO marking panels. Markings may be placed on the outside of cleared floors on multistory buildings to show friendly forces the progress of the clearing operation if this will not give intelligence to enemy forces.
- Provide a SITREP in accordance with the unit SOP when the room is cleared.

- Maintain security at all times and be prepared to react to more enemy contact at any moment. Priority must be given to the direction of attack, but rear security should not be neglected.
- Rotate clearing teams to maintain the momentum of the attack.



**Figure 6-8. Sample marking SOP.**

c. **Clearing Techniques.** Methods of movement, firing techniques, weapon positioning, and reflexive shooting are fundamentals used in urban combat. Employing these techniques provides an effective means of achieving success, minimizing noncombatant casualties, and conserving ammunition. Each member of the unit must understand the principles of precision combat and his part in their successful execution.

(1) Special clearing techniques may be required when highly restrictive ROE are in effect. The enemy situation may require that the units clear only a few selected buildings methodically to accomplish their mission rather than using firepower to suppress and neutralize buildings in the objective area. Examples of reasons for a highly restrictive ROE are:

- Use of heavy supporting fires and demolitions would cause unacceptable collateral damage.
- Enemy combatants are so intermixed with noncombatants that the ROE prevents US forces from using all their available supporting fires, and room-by-room clearing may be necessary.



- The likelihood of fratricide requires restrictive ROE.

(2) In a situation where the ROE favor overwhelming firepower, units should employ direct and indirect fires, demolitions, and fragmentation or concussion grenades as necessary to assist in clearing an objective defended by an alert and determined force without noncombatants. (See FM 3-06.11 for more information concerning entering buildings and room clearance techniques.

**NOTE:** To prevent the possibility of fratricide or injury to friendly inhabitants, leaders should consider the use of stun grenades rather than the fragmentation or concussion grenade.

## **6-6. CONSOLIDATION AND REORGANIZATION**

The squad and platoon will conduct consolidation and reorganization immediately after each action where soldiers are engaged and ammunition is expended. Consolidation is the action taken by the squad or platoon to ensure its security, to prepare for a counterattack by the enemy, and to prepare to continue the mission. Consolidation in an urban environment must be quick in order to repel enemy counterattacks and to prevent the enemy from infiltrating back into cleared buildings or floors. After securing a floor (bottom, middle, or top), selected members of the unit are assigned to cover potential enemy counterattack routes to the building. Priority must be given initially to securing the direction of attack. Security elements alert the unit and place a heavy volume of fire on enemy forces approaching the unit. Reorganization occurs after consolidation. These actions prepare the unit to continue the mission by ensuring key leadership positions are filled and important weapon systems are manned. Many reorganization actions occur simultaneously during the consolidation of the objective.

a. **Consolidation Actions.** Squads assume hasty defensive positions to gain security immediately after the objective has been seized or cleared. Squads that performed missions as assault elements should be prepared to assume an overwatch mission and to support another assault element. Units must guard all avenues of approach leading into their area. These may include:

- Enemy mouseholes between adjacent buildings.
- Covered routes to the building.
- Underground routes into the basement.
- Approaches over adjoining roofs.

b. **Reorganization Actions.** After consolidation, leaders ensure the following actions are taken:

- Resupply and redistribute ammunition.
- Mark buildings to indicate to friendly forces that they have been cleared.
- Treat and evacuate wounded personnel. Once the objective area is secure, begin evacuating noncombatants then enemy wounded.
- Treat and process EPWs.
- Segregate and safeguard noncombatants.
- Reestablish the chain of command.

**6-7. CONTINUATION OF THE ASSAULT MISSION**

If the unit is going to continue with its original mission, its “be prepared/on order” mission, or receives a new mission, it must accomplish the following tasks:

- The momentum must be maintained. This is a critical factor in clearing operations. The enemy cannot be allowed to move to its next set of prepared positions or to prepare new positions.
- The support element pushes replacements, ammunition, and supplies forward to the assault element.
- Security for cleared areas must be established IAW the OPORD or SOP.
- The support element must displace forward to ensure that it is in place to provide support to the assault element such as isolation of the new objective.

**Section II. DEFENSE**

In urban areas, buildings provide cover and concealment, limit fields of observation and fire, and block movement of troops, especially mechanized troops. This section covers the key planning considerations, weapons selection, preparations, and the construction of a platoon defensive position on urbanized terrain.

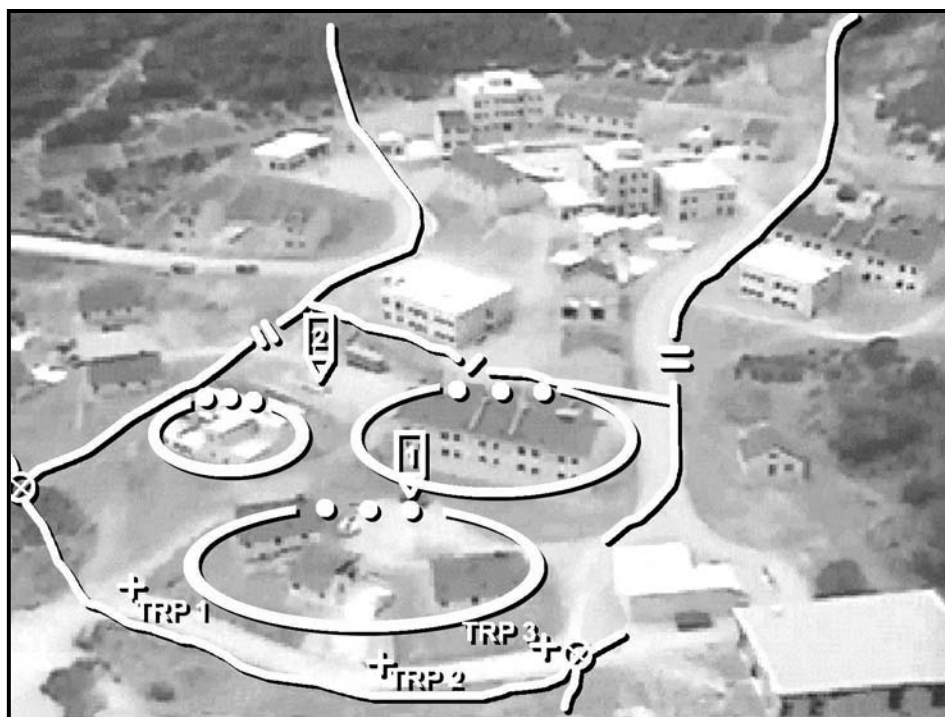
**6-8. PLANNING THE DEFENSE**

Planning the defense begins when the leader receives a mission or determines a requirement to defend such as during consolidation and reorganization after an assault. The leader must use terrain wisely and designate a point of main effort. He chooses defensive positions that force the enemy to make costly attacks or conduct time-consuming maneuvers to avoid them. A position that the enemy can readily avoid has no defensive value unless the enemy can be induced to attack it. The defense, no less than the offense, should achieve surprise. As platoon leaders conduct their troop-leading procedures, they must consider civilians, ROE, limited collateral damage, and coordination with adjacent units to eliminate the probability of fratricide. Maneuver, methods, and courses of action in establishing defensive positions in and around urbanized terrain are METT-TC intensive.

a. The focus of the squad and platoon for defending in an urban area is the retention of terrain. As with most defensive scenarios, the squad and platoon will defend as part of the company. The platoon will either be given a sector to defend or a battle position to occupy, and the platoon leader must construct his defense within the constraints given to him. In an urban area, the defender must take advantage of the abundant cover and concealment. He must also consider restrictions to the attacker’s ability to maneuver and observe. By using the terrain and fighting from well prepared and mutually supporting positions, a defending force can delay, block, fix, or inflict heavy losses on a much larger attacking force.

b. One of the most common defensive tasks a platoon will be given during urban operations is to conduct a strongpoint defense of a building, part of a building, or a group of small buildings (Figure 6-9). The platoon’s defense is normally integrated into the company’s mission. The platoon leader organizes the strongpoint defense by positioning personnel and their weapons systems to maximize their capabilities. Supporting fires are incorporated into the overall defensive plan to provide depth to the engagement area

(1) The platoon leader organizes the defense into a series of individual, team, and squad fighting positions located to cover avenues of approach and obstacles, and to provide mutual support in order to repel the enemy advance. Snipers should be positioned to support the commander's intent and to allow for the opportunity to engage C2 and key targets.



**Figure 6-9. Defensive strongpoint.**

(2) Position BFVs in covered or concealed locations where they can observe and fire into the engagement area, or use a hide position that they can stay in until the enemy is in the engagement area, then rapidly move into position and kill them.

(3) Depending on the length of the mission, the platoon should stockpile munitions, food and water, medical supplies, and fire fighting equipment.

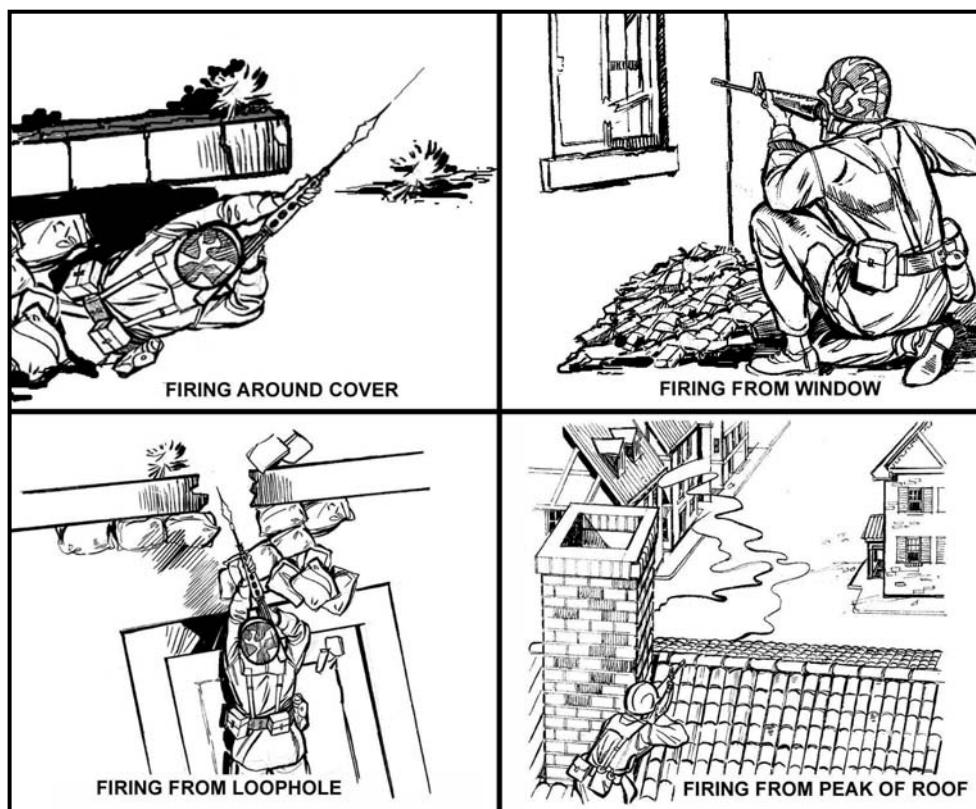
## **6-9. HASTY DEFENSE**

While operating in an urban area, it is highly possible that the infantry platoon will be called upon to conduct a hasty defensive mission. Unlike the deliberate defense, the hasty defense is characterized by the lack of information about enemy forces and the lack of time to prepare the defense. All of the troop-leading procedures are the same, and many of the priorities of work of the deliberate defense will be the same but may take place concurrently. Units are deployed, BFVs and key weapons emplaced, and fighting positions prepared in accordance with the amount of time available to the unit.

a. **Occupation and Preparation of Positions.** The extent of preparation the platoon is able to accomplish will depend on the amount of time available. Normally, when occupying hasty defensive positions, the platoon takes advantage of the cover and

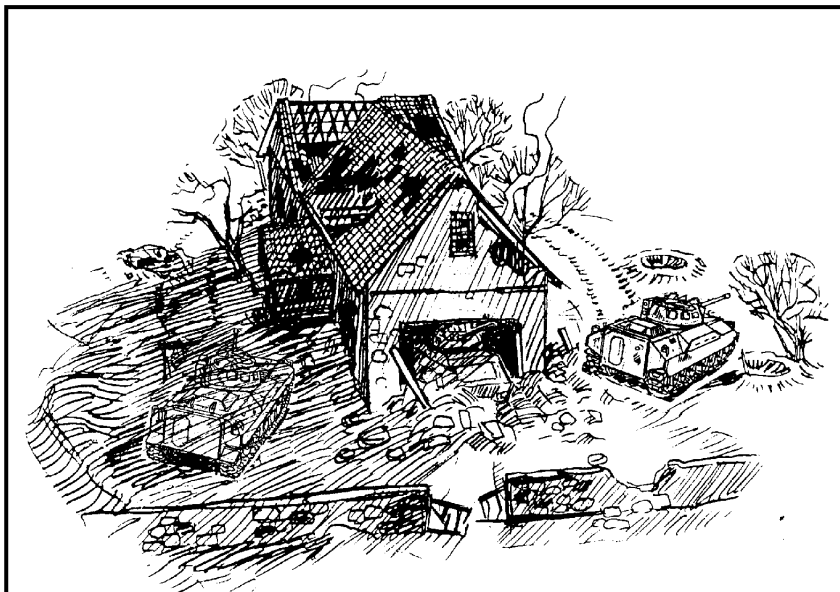
concealment already present. Given time and materials, the platoon will continue to make improvements to the positions.

(1) In a hasty defense, the platoon first establishes security and positions crew-served weapons. The priorities of improvements may be directed by the priority of work contained in the unit SOP. As a minimum, these improvements should include fields of fire, overhead cover, additional direct fire protection, and camouflaging of individual positions. Fighting positions in buildings are constructed away from windows and other openings in the shadows of the room using appliances, furniture, and other convenient items and materials. Some of the more common hasty fighting positions in an urban area are corners of buildings, behind walls, windows, unprepared loopholes, and the peak of a roof (Figure 6-10).



**Figure 6-10. Hasty firing positions.**

(2) In the urban area, hasty fighting positions for the BFV can be anything from occupying a position in the shadow of a building to a well-covered and concealed position inside a solid structure (Figure 6-11). When positioning the BFV in urban areas, leaders must consider enemy avenues of approach, both mounted and dismounted; key terrain; observation and fields of fire; cover and concealment; fire and explosion hazards; communication restrictions; and withdrawal routes.



**Figure 6-11. Positions in shadows, in buildings, and in the open.**

(3) Throughout the defense, the platoon continues to improve its hasty defensive positions. Over time, the hasty defense can become a deliberate defense. The platoon leader and his squad leaders make continuous adjustments to the defense to reduce weaknesses that could result in the failure of the overall defense. The priority of work will serve as the guide for improving the defense, and the leaders will supervise the accomplishment of the following tasks:

- Position BFVs and key weapons.
- Construct barriers and emplace obstacles.
- Prepare individual, alternate, and supplementary fighting positions.
- Rehearse the counterattack force, engagement sequences, and repositioning.
- Enhance mobility.

b. **Improving the Defense.** As time permits, the leaders ensure the following improvements are accomplished:

- Cover and concealment of BFVs and key weapons.
- Barrier and obstacle improvement.
- Improvement of primary and alternate positions.
- Preparation of supplementary positions.
- Additional movement enhancement efforts.
- Initiation of patrols.
- Improvement of camouflage.
- Continued rehearsals for counterattack and withdrawal.
- Sleep plan.

## **6-10. PRIORITIES OF WORK AND DEFENSIVE CONSIDERATIONS**

General defensive considerations in urban terrain are similar to any other defensive operations. Fighting positions in urban areas are usually constructed inside buildings and

are selected based on an analysis of the area in which the building is located, the individual characteristics of the building, and the characteristics of the weapons system.

a. **Priorities of Work.** The general priorities of work in the urban environment should include special attention to the following:

(1) Select key weapons and BFV positions to cover likely mounted and dismounted avenues of approach. To cover armored avenues of approach, position BFVs where flank engagements will occur and position anti-armor weapons inside buildings with adequate space and ventilation for back-blast (on upper floors, if possible, for long-range shots). Position M240Bs and M249s to cover dismounted avenues of approach. Place them near ground level to increase grazing fires. If ground rubble obstructs grazing fires, place MGs/SAWs in the upper stories of the building. Ensure that weapons are mutually supporting and are tied-in with adjacent units.

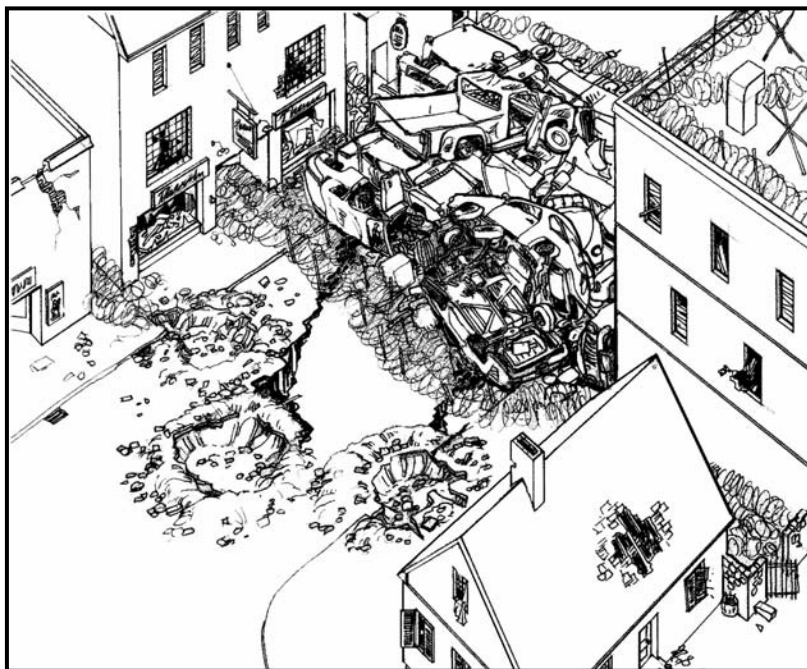
(2) Ensure the position is free of noncombatants. Remove them from the area of operations before occupation of the position.

(3) Clear fields of fire. Prepare loopholes, aiming stakes, sector stakes, and TRP markings. Construct positions with overhead cover and camouflage (inside and outside).

(4) Identify and secure subterranean avenues of approach (sewers, basements) as well as stairwells and rooftops.

(5) Stockpile ammunition, food, fire-fighting equipment, and drinking water.

(6) Construct barriers and emplace obstacles to deny the enemy access to streets (Figure 6-12), underground passages, and buildings, and to slow his movement. Integrate barriers and obstacles with key weapons. Cover all barriers and obstacles by fire (both direct and indirect) and or observation. Conceal the obstacles from enemy observation as much as possible. Erect the obstacles in an irregular pattern to hinder enemy movement. Employ the obstacles in depth (if possible). Tie the obstacles in with existing obstacles.



**Figure 6-12. Obstacles blocking street.**

(7) Improve and mark movement routes between positions as well as to alternate and supplementary positions. Improve routes by digging trenches, using sewers and tunnels, creating mouseholes, and emplacing ropes for climbing and rappelling and ladders for ascent and descent.

b. **Considerations.** The following must be considered when establishing a defensive position.

(1) **Security.** The first priority is to establish all-round security. Each position should have at least one soldier provide security during all preparations.

(2) **Protection.** Select buildings or sites that provide protection from direct and indirect fires. Reinforced concrete buildings with three or more floors provide suitable protection while buildings constructed of wood, paneling, or other light material must be reinforced to provide sufficient protection. One- and two-story buildings without a strongly constructed cellar are vulnerable to indirect fires and require construction of overhead protection for each fighting position. If possible, use materials gathered from the immediate area to build the overhead cover.

(3) **Dispersion.** A platoon position should not be established in a single building when it is possible to occupy two or more buildings that permit mutually supporting fires. A position in one building without mutual support is vulnerable to bypass, isolation, and subsequent destruction from any direction.

(4) **Concealment.** Do not select buildings that are obvious defensive positions (easily targeted by the enemy). If the requirements for security and fields of fire dictate the occupation of exposed buildings, the platoon will be required to add reinforcement materials to the building to provide suitable protection to the troops inside.

(5) **Fields of Fire.** To prevent isolation, individual and crew-served weapons positions should be mutually supporting and have fields of fire in all directions. When clearing fields of fire, try to maintain the natural appearance of the surrounding area if possible. It may be necessary to remove objects that interfere with the gunner's field of vision.

(6) **Covered Routes.** Defensive positions should have at least one covered and concealed route for dismounted infantry that allows resupply, medical evacuation, reinforcement, or withdrawal from the building without being detected. At a minimum it should provide protection from direct fire weapons. The route can be established using underground systems, communications trenches, or walls and buildings that allow covered movement.

(7) **Observation.** Positions in buildings should permit observation of enemy avenues of approach and adjacent defensive sectors. Upper stories offer the best observation but also attract enemy fire.

(8) **Fire Hazard.** If possible, avoid selecting positions in buildings that are obvious fire hazards. If these flammable structures must be occupied, reduce the danger of fire by wetting down the immediate area, laying an inch of sand on the floors, and providing fire extinguishers and fire fighting equipment. Ensure that each defender is familiar with the withdrawal routes and that they have the opportunity to rehearse their withdrawal using these planned routes in the event of fire.

(9) **Time.** Time is the one element in METT-TC that the platoon and its leaders have no control over. The most important factor to consider when planning the use of time is

to provide subordinate leaders with two-thirds of all available time. The unit SOP provides the leaders with their priorities when time does not allow for detailed planning. The platoon will complete defensive preparation IAW the SOP and the commander's operational priorities.

c. **Preparation.** Preparation of the platoon's individual fighting positions will be conducted inside the buildings the platoon has been assigned to defend. As with all defensive positions, the leader's first task is to establish security. This normally will be in the form of an observation post located within the protection of the platoon's direct fire weapons. The OP should be manned with at least two personnel. Leaders then assign individual or two-man positions to adequately cover the sector. The squad leader will position himself to best control his squad. The platoon leader designates the level of security to be maintained. The remaining personnel continue to work preparing the defense. The leaders will continue to make improvements to the defense as time permits. (The preparation of fighting positions is discussed in detail in FM 3-06.11.)

d. **Other Typical Tasks.** Additional defensive preparation tasks may be required in basements, on ground floors, and on upper floors.

(1) **Basements and Ground Floors.** Basements require preparation similar to that of the ground floor. Any underground system not used by the defender that could provide enemy access to the position must be blocked.

(a) *Doors.* Unused doors should be locked or nailed shut as well as blocked and reinforced with furniture, sandbags, or other field expedients.

(b) *Hallways.* If not required for the defender's movement, hallways should be blocked with furniture and tactical wire.

(c) *Stairs.* Unused stairs should be blocked with furniture and tactical wire (Figure 6-13) or removed. If possible, all stairs should be blocked, and ladders should be used to move from floor to floor and then removed.

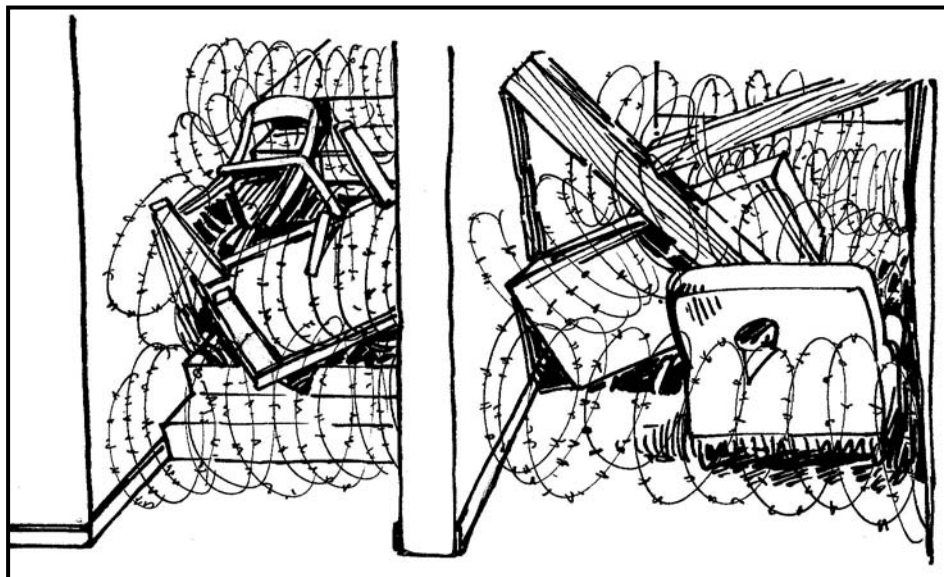
(d) *Windows.* Remove all glass. Block unused windows with boards or sandbags to prevent observation and access.

(e) *Floors.* Make fighting positions in the floors. If there is no basement, fighting positions can give additional protection from heavy direct-fire weapons.

(f) *Ceilings.* Erect support for ceilings that cannot withstand the weight of rubble from upper floors.

(g) *Unoccupied Rooms.* Block rooms not required for defense with tactical wire.





**Figure 6-13. Blocking stairs and doorways.**

(2) **Upper Floors.** Upper floors require the same preparation as ground floors. Windows need not be blocked, but should be covered with wire mesh, canvas, ponchos, or other heavy material to prevent grenades from being thrown in from the outside. The covering should be loose at the bottom to permit the defender to drop grenades.

(3) **Interior Routes.** Routes are required that permit defending forces to move within the building to engage enemy forces from any direction. Plan and construct escape routes to permit rapid evacuation of a room or a building. Mouseholes should be made through interior walls to permit movement between rooms. Such holes should be marked to enable defenders to easily locate them during both day and night conditions. Brief all personnel as to where the various routes are located and conduct rehearsals so that everyone becomes familiar with the routes.

(4) **Fire Prevention.** Buildings that have wooden floors and rafter ceilings require extensive fire prevention measures. Cover the attic floor and other wooden floors with about one to two inches of sand or dirt, and position buckets of water for immediate use. Place fire-fighting materials (dirt, sand, fire extinguishers, and blankets) on each floor for immediate use. Fill water basins and bathtubs as a reserve for fire fighting. Turn off all electricity and gas. If available, use any existing fire extinguishers found in buildings.

(5) **Communications.** Urban operations require centralized planning and decentralized execution, and communications plays an important part in this process.

(a) Structures and a high concentration of electrical power lines may degrade radio communication in built-up areas and affect a platoon's ability to send and receive digital messages and situational awareness. Many buildings are constructed in such a manner that radio waves will not pass through them.

(b) Visual signals may be used but often are not effective because of the screening effects of buildings and walls. Signals must be planned, widely disseminated, and understood by all assigned and attached units.

(c) Increased noise makes the effective use of sound signals difficult. Verbal signals may communicate the unit's location and intent to the enemy.

(d) Messengers and wire can be used as other means of communication. Wire should be considered an alternate means of communication if assets are available.

(6) **Rubbling.** Rubbling parts of the building may provide additional cover and concealment for weapons emplacements or serve as an obstacle against the enemy. Because of the inherent danger associated with rubbling a building, engineers should perform this task. Units should limit rubbling so as not to impede their own movement within the urban area. If not designated by higher, the platoon must receive permission from higher before rubbling a building within its sector.

(7) **Rooftops.** Platoons must position obstacles on the roofs of flat-topped buildings to prevent helicopters from landing and to deny troops from gaining access to the building from the roof. Cover rooftops that are accessible from adjacent structures with tactical wire or other expedients and guard them. Block entrances to buildings from rooftops if compatible with the overall defensive plan. Remove or block any structure on the outside of a building that could aid the attacker in scaling the building to gain access to upper floors or to the rooftop.

(8) **Obstacles.** Position obstacles adjacent to buildings to stop or delay vehicles and infantry. To save time and resources in preparing the defense, platoon leaders must allow the use of all available materials, such as automobiles, railcars, and rubble, to create obstacles. Vehicles can be tied together by running poles through their windows. Leaders must supervise the construction of obstacles to ensure they are tied to buildings and rubble areas to increase effectiveness and to canalize the enemy into engagement areas selected by the leader. Direct support engineers can provide advice and resources as to the employment of obstacles and mines.

(a) The principles for employing mines and obstacles do not change in the defense of an urban area; however, techniques do change. For example, burying and concealing mines in streets is difficult due to concrete and asphalt. Mines may be placed in sandbags as a technique of camouflage.

(b) Civilian construction equipment and materials must be located and inventoried. This equipment can be used with engineer assets or in place of damaged equipment. In host nation countries, coordination must be made with proper civilian officials before use.

(9) **Fields of Fire.** The field of fire is the area a weapon or group of weapons may cover effectively with fire from a given position. After the defensive positions are selected and the individuals have occupied their assigned positions, they will determine what clearance is necessary to maximize their field of fire. Leaders and individuals must view fields of fire from the fighting position and from the view of the enemy. Only selective clearing will be done to improve the field of fire. If necessary, the position will be relocated to attain the desired field of fire. Within the field of fire, leaders will designate a primary and an alternate sector of fire for each weapons system. Each weapons system has unique requirements for its field of fire, and the platoon and squad leaders must ensure these requirements are met. Each position is checked to ensure that the fields of fire provide the maximum opportunity for target engagement and to determine any dead space within the sector of fire.

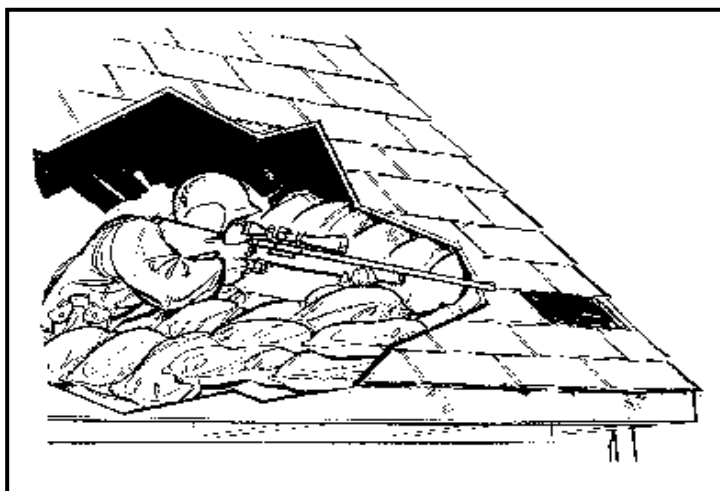
e. **Antitank Weapons Positions.** Employ antitank weapons in areas that maximize their capabilities. Position AT weapons in upper stories, and in support of the BFV when

possible (Figure 6-14). The need for protective positioning may require the weapon to be fired from inside of a building, from behind the cover of a building, or from behind the cover of protective terrain. Leaders should make every effort to employ antitank weapons in pairs so that the same target can be engaged from different positions. Another consideration is security for the crew and system. This is necessary to allow the gunner to concentrate on locating and engaging enemy armor.



**Figure 6-14. Javelin position supporting BFV.**

f. **Sniper Positions.** Snipers give the platoon a force multiplier by providing an overwatch capability and by engaging enemy C2 targets. Snipers normally operate in two-man teams, which provides the shooter with security and another set of eyes for observation and to locate and identify targets. Leaders should allow the snipers to select their own positions for supporting the defense. Snipers deploy in positions where they are not easily detected (Figure 6-15), and where they can provide the most benefit. (See FM 23-10 and FM 3-06.11 for more information on the employment of snipers.)



**Figure 6-15. Sniper position (cut away).**

**6-11. CONDUCT OF THE DEFENSE**

The conduct of the defense in an urban area is similar to the conduct of the defense in any other area. The current standard sequence of actions is listed in Chapter 5 of this manual.

**6-12. CONSOLIDATION AND REORGANIZATION**

The process of consolidation and reorganization in an urban area is similar to the process in any other area. The current standard sequence of actions is listed in Chapter 4 of this manual.

**6-13. COUNTERATTACK**

A platoon may be given the mission to counterattack in order to retake a defensive position or key point, to destroy or eject an enemy foothold, or to stop an enemy attack by hitting his flank and forcing him to stop his movement and establish a hasty defense.

a. A platoon counterattack is planned at company level to meet each probable enemy penetration. They must be well coordinated and violently executed. Counterattacks should be directed at the enemy's flank and supported with direct and indirect fires.

b. If tank support is available, it should be used in conjunction with the BFVs to spearhead the counterattack. Tanks have the mobility, firepower, and survivability to quickly execute the counterattack mission. They are ideally suited for destroying enemy armor, heavy weapons, and fortifications with their main gun and engaging enemy infantry with their coaxial machine gun. This capability will assist the infantry in executing its part of the mission.

c. The counterattack mission is planned and coordinated as part of the defensive operation.

(1) Considerations for counterattack planning may include, but are not limited to, the following:

- Location of friendly units.
- Location of noncombatants.
- Critical location in the defense that, if threatened, could collapse.
- Where in the defense do we want the enemy to think he is successful?
- Size and type of force required to defeat and eject the enemy.
- Who determines and initiates the execution of the counterattack?

(2) Control measures needed for the conduct of the counterattack include:

- Assembly area or blocking position.
- Start point, route, and release point, if necessary.
- Attack position.
- Line of departure or line of contact.
- Zone of action, direction of attack, and or axis of advance.
- Objective.
- Limit of advance.

**Section III. COMBAT MULTIPLIERS**

An important lesson learned from recent urban operations (UO) is the need for a fully integrated combined arms team. The nature of UO makes it infantry-centric. However,

the urban battle should never be exclusively an infantry fight. A powerful combined-arms team properly employed in an urban area will enhance mission accomplishment. Although the infantry soldier is required in order to clear and secure an urban area, the integration of armor and engineers is needed for increased lethality. Fully integrated aviation, field artillery, communications, and logistical elements must provide support for these teams. This section discusses the more common combat multipliers available to the infantry platoon during the execution of UO.

#### 6-14. ARMORED VEHICLES

Based on the considerations of the METT-TC analysis and the operational ROE, a situation may arise that requires the attachment of tanks in direct support of the mechanized infantry mission. This paragraph discusses tactics and techniques used by infantry units when working with armored vehicles.

##### a. Task Organization for Tank/Mechanized Operations.

(1) **Maneuver.** Leaders must understand the principles of employing infantry and armor forces to maximize their capabilities and ensure mutual support. Maneuver by the infantry is enhanced by support from the armored vehicles.

(a) The infantry assists the heavy forces by infiltrating to clear obstacles or key enemy positions and to disrupt the enemy defense. They provide security for the armored vehicles by detecting and suppressing or destroying enemy antitank weapons. They designate targets and spot the impact of fires for tanks and BFVs.

(b) Heavy forces support the infantry by moving with them along an axis of advance and providing a protected, fast moving assault weapons system. They suppress and destroy enemy weapons, bunkers, and tanks by fire and maneuver (Figure 6-16). They also provide transport when the enemy situation permits.

(c) Armored vehicles should never be maneuvered individually. The smallest maneuver level for armor is a section (two vehicles).



Figure 6-16. Tank in direct support of infantry.

(2) **Command and Control.** The infantry platoon may have combat elements in direct support. The platoon leader is responsible for incorporating these elements into his C2 functions. Because most support elements have a habitual relationship with the combat unit they support, the platoon leader may only need to give them an update to recent changes to guarantee that C2 remains a high priority.

(a) Tanks and mechanized infantry must work closely at platoon level. In most operations where they work together, infantrymen must establish direct communication with individual vehicles to ensure quick and accurate response to directions given.

(b) Infantrymen and vehicle crews must know how to communicate by radio, telephone, and visual signals. Prior to the start of an operation, infantry and tank leaders must coordinate the methods of communication and the types of signals that will be used. For immediate, direct communication with the M1A1/A2, the crew can run communication wire from the vehicle intercom system kit (AN/VIC or AN/VS3) through the loader's hatch or vision block and be connected to a field phone attached to the outside of the tank.

(c) During the planning phase of an operation, infantry and armor leaders must allocate sufficient time for the conduct of detailed brief-backs and rehearsals. The purpose of these activities is to verify that long- and short-range communications are effective, and that what is expected from each organization is understood.

**NOTE:** For further discussion concerning the strengths, limitations, and employment considerations of armor with the infantry, see FM 3-06.11.

b. **Weapon System Considerations.** While operating in concert with armored forces, the infantry leader must be knowledgeable of the capabilities, limitations, and effects of the armor weapon systems. He must understand the dangers these systems pose to his soldiers when operating together and ensure that his soldiers are briefed about these dangers. Figure 6-17 shows the difference in the capabilities of the BFV and the M1A1/A2 tank with regard to fields of fire on urban terrain. Note that the BFV can engage a target 9 to 10 stories high at 20 meters, whereas an M1A1/A2 tank requires 90 meters.

(1) **Bradley Fighting Vehicles.**

(a) The primary role of the BFV in an urban environment is to provide suppressive fires and to breach exterior walls. The vehicle's armor-piercing rounds can be very useful in urban terrain. It can penetrate concrete up to 16 inches thick and can easily penetrate brick structures. It is highly effective against earthen- and sandbag-reinforced structures.

(b) The BFV can elevate its 25-mm gun to about +60 degrees and depress the gun to about -10 degrees.

(c) The crew has limited visibility to the sides and rear and no visibility to the top when buttoned up.

(d) The BFV can be outfitted with an external phone hookup for communications with accompanying infantry.

(e) The 25-mm gun can be used effectively against enemy-occupied buildings and fortifications, firing AP, HE, and even TP-T rounds.

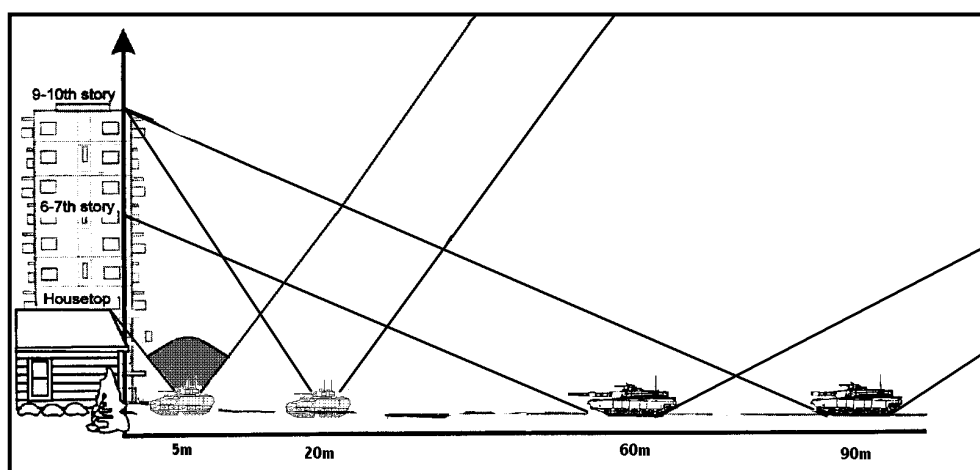
(2) ***M1-Series Tanks.***

(a) Normally, the primary ammunition for the main gun in the urban environment is the HEAT round. It is the most effective round against masonry and will penetrate all but the thickest reinforced concrete. A HEAT round will create a hole in masonry or concrete large enough for a man to fit through but will not cut the reinforcing steel bars. HEAT is also effective against earthen- and sandbag-reinforced strong points. A 120-mm HEAT round does not become armed until it is about 36 feet from the end of the gun tube.

(b) Multipurpose antitank (MPAT) rounds will penetrate masonry and concrete but are less effective than HEAT rounds against heavier structures.

(c) Sabot ammunition has limited use against nonvehicular targets, and its discarding petals endanger accompanying infantry. Sabot petals create a hazard area extending 70 meters on either side of the gun target line for a distance of one kilometer.

(d) The external M2 HB (cal. 50) machine gun can elevate to +36 degrees; however, to fire the cal. 50 on the M1A2 Abrams, the tank commander must be exposed to enemy fire.



**Figure 6-17. Fields of fire on urban terrain.**

**NOTE:** When employing these weapon systems to support the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast over pressure, and how it will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

## **6-15. ENGINEERS**

Normally an engineer squad will be attached to an infantry company. Most engineer manual-labor tasks (for example, preparing fighting positions) will have to be completed by infantry units, with reinforcing engineer heavy-equipment support and technical supervision. (For further discussion on the employment of engineers with the infantry, see FM 3-06.11.)

a. **Offensive Missions** During offensive operations, an engineer sapper team may be attached to the infantry platoon that is designated as the primary assault element. They may be required to conduct the following tasks in support of the infantry platoon:

- Use explosives to destroy fortifications and strong points that cannot be reduced with the maneuver unit's organic assets.
- Locate and remove mines that may hamper the unit's movement.
- Conduct breaching operations.

b. **Defensive Missions.** Engineers may perform the following tasks in support of the platoon during the defense of an urban area:

- Construct complex obstacle systems.
- Assist in the preparation of defensive positions and strong points.

**NOTE:** When employing demolitions along side the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast over pressure, and how it will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

## 6-16. MORTARS

Mortars are the most responsive indirect fires available at battalion and below. Their mission is to provide close and immediate fire support to maneuver units. Mortars are well suited for combat in urban areas because of their high rate of fire, steep angle of fall, and short minimum range. Leaders must plan mortar support with the FSO as part of the total fire support system. (See FM 7-90 for detailed information on the tactical employment of mortars.)

a. **Role of Mortar Units.** The primary role of mortar units is to deliver suppressive fires to support maneuver, especially against dismounted infantry. Mortars can also be used to obscure enemy observation and to illuminate the target area at night. Mortar fires inhibit enemy fires and movement, allowing friendly forces to maneuver to a position of advantage. Effectively integrating mortar fires with dismounted maneuver is key to successful combat in an urban area at the rifle company and battalion level.

b. **Position Selection.** The selection of mortar positions depends on the size of buildings, the size of the urban area, and the mission.

(1) The use of existing structures (for example, garages, office buildings or highway overpasses) for hide positions is recommended to afford maximum protection and minimize the camouflage effort.

(2) Mortars should not be mounted directly on concrete; however, sandbags may be used as a buffer. Sandbags should consist of two or three layers, be butted against a curb or wall, and extend at least one sandbag width beyond the baseplate.

(3) Mortars are usually not placed on top of buildings because lack of cover makes them vulnerable. Overpressure can injure personnel, and the shock on the floor can weaken or collapse the structure. Mortars should not be placed inside buildings with damaged roofs unless the structure's stability has been checked.

c. **High-Explosive Ammunition.** During urban combat, mortar HE fire is used more than any other type of indirect fire weapon. The most common and valuable use of mortars is for harassment and interdiction fires. One of their greatest contributions is interdicting supplies, evacuation efforts, and reinforcement in the enemy rear just behind his forward defensive positions. Although mortar fires are often targeted against roads and other open areas, the natural dispersion of indirect fires will result in many hits on



buildings. Leaders must use care when planning mortar fires during urban combat to minimize collateral damage.

(1) High-explosive ammunition, especially the 120-mm projectile, provides good results when used on lightly built structures within cities. It does not perform well against reinforced concrete found in larger urban areas.

(2) When using HE ammunition in urban fighting, only point-detonating fuzes should be used. The use of proximity fuzes should be avoided because the nature of urban areas causes proximity fuzes to function prematurely. Proximity fuzes, however, are useful in attacking targets such as OPs on tops of buildings.

(3) During World War II and recent Middle East conflicts, light mortar HE fires have been used extensively during urban combat to deny the use of streets, parks, and plazas to enemy personnel.

d. **Illumination.** In the offense, illuminating rounds are planned to burst above the objective to put enemy troops in the light. If the illumination is behind the objective, the enemy troops would be in the shadows rather than in the light. In the defense, illumination is planned to burst behind friendly troops to put them in the shadows and place the enemy troops in the light. Buildings reduce the effectiveness of the illumination by creating shadows. Continuous illumination requires close coordination between the FO and FDC to produce the proper effect by bringing the illumination over the defensive positions as the enemy troops approach the buildings.

e. **Special Considerations.** When planning the use of mortars, leaders must consider the following:

(1) Forward observers should be positioned in the upper levels of buildings so target acquisition and adjustments in fire can be accomplished effectively.

(2) Leaders must understand ammunition effects correctly to estimate the number of volleys needed for specific target coverage. The effects of using WP or RP may create unwanted smoke screens or limited visibility conditions that could interfere with the tactical plan.

(3) Forward observers must be able to determine dead space. Dead space is the area in which indirect fires cannot reach the street level because of buildings. This area is a safe haven for the enemy. For mortars, the dead space is about one-half the height of the building.

(4) Mortar crews should plan to provide their own security.

(5) Commanders must give special consideration to where and when mortars are to displace while providing immediate indirect fires to support the overall tactical plan. Combat in urban areas adversely affects the ability of mortars to displace because of rubble and the close nature of urban combat.

## 6-17. FIELD ARTILLERY

During urban combat, field artillery (FA) provides direct support, general support, and general support reinforcing to infantry units. This paragraph provides considerations for the use of field artillery in the direct-fire mode. (For further discussion on the employment of field artillery in urban terrain, see FM 3-06.11.)

a. When FA supports fighting in urban areas, fire support coordination measures necessary to provide adequate yet safe support must be carefully considered due to the

close proximity of friendly forces to the enemy. When planning for fire support, leaders should consider the following:

- The increased cover and concealment afforded by the terrain.
- Ground observation is limited in urban areas.
- Adjusting fires is difficult since buildings block the view of adjusting rounds.
- Acquiring targets is difficult in urban terrain because the enemy has many covered and concealed positions and movement lanes.
- Forward observers must be able to determine where and how large the dead spaces are.
- The use of air burst fires is an effective means of clearing snipers from rooftops.

b. Employing artillery in the direct-fire mode to destroy fortifications should be considered, especially when assaulting well-prepared enemy positions. Also, restrictive fire support coordination measures, such as a “restrictive fire area” or “no-fire area,” may be imposed to protect civilians and critical installations.

(1) 155-mm self-propelled howitzer is extremely effective in neutralizing concrete targets with direct fire.

(2) Concrete-piercing 155-mm rounds can penetrate 36 inches of concrete at ranges up to 2,200 meters.

(3) When employing artillery in the direct-fire mode and maneuvering the self-propelled howitzers within the urban area, it is important that the infantry secure them because they do not have any significant protection for their crews.

**NOTE:** When employing these weapon systems to support the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast over pressure, and how it will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

## **6-18. ATTACK HELICOPTERS**

Infantry units may receive support by a variety of attack helicopters, including (but not limited to) the AH-64A, AH-64D, OH-58D, and MH-6. Attack helicopters can provide area fire to suppress targets and precision fire to destroy specific targets or breach structures. Attack helicopters provide real-time reconnaissance information through direct viewing of the area of operations. This facilitates the platoon leader’s ability to effectively coordinate and integrate all aspects of the mission. Attack helicopters can also assist with ISR CAS integration and communications using their advanced suite of sensors and radios. Other supporting helicopters, such as the UH-60, CH-47 and MH-47 may also have weapons systems (7.62-mm machine gun, cal. 50 machine gun, 7.62-mm mini-gun) that aid in the suppression of enemy forces when operating in urban terrain. Operational control of attack helicopter units will remain at the level of battalion or higher; however, attack helicopters may conduct direct air-to-ground coordination with companies and platoons during combat operations. (For further discussion on the supporting role of the attack helicopter, see FM 1-114 and FM 3-06.11.)

## 6-19. ANTIARMOR WEAPONS

The tactical use of antiarmor weapons does not change in the urban environment but how they are employed does. Some of those employment limitations are: stand-off, displacement after engagements, the ability to fire in-depth engagements, more obstacles, increased danger zones, and all-round security. (For further discussion on the employment of antiarmor weapons in the urban environment, see and FM 3-06.11.)

a. Although antiarmor weapons are primarily designed to destroy armored vehicles, they can also be used to damage or destroy fortifications. Additionally, they can be used for ballistic breaching of doorways and the walls of lightly constructed buildings to create entry points. They may also be used for creating deceptions just before the assault element enters the actual initial breach (entry) point. The larger systems (TOW and Dragon) that have highly magnified day and thermal sights can be used to detect snipers and to disrupt or kill them with long-range missiles.

b. Engaging targets from an enclosure creates unique hazards. Before positioning soldiers in enclosures (combat only), leaders must consider several factors that affect safety. Only in combat, and when no other tactical option exists, should antiarmor weapons be fired from an enclosure. If antiarmor weapons must be employed this way, the enclosure must meet the following minimum requirements.

- Construction of wood or stucco buildings must be sturdy to reduce the damage that will occur.
- All objects and debris must be removed from the rear of the weapon because the backblast will cause loose objects to fly around the enclosure, possibly injuring someone.

**NOTE:** When employing these weapon systems to support the infantry assault, leaders must be aware of the explosive effects and fragmentation fallout, as well as the blast over pressure, and how it will affect the infantry on the ground. (For more specific information on the effects of weapons, see FM 3-06.11.)

## 6-20. SNIPERS

The company sniper team is an important and effective combat multiplier. While conducting offensive operations in urban areas, the sniper can be used as part of the support element to provide accurate, long-range fires. They can also be an invaluable source of information with their observation capability. The sniper team is a company asset and may be attached to a platoon in order to conduct a mission-specific task. However, it is unlikely that the platoon would be given tactical control of a sniper team. (For further discussion on the employment of snipers, see and FM 3-06.11.)